

MEASUREMENT AND EVALUATION OF INTELLECTUAL CAPITAL

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Abstract: The purpose of the paper is to provide the succinct description of the current status of theory and practice in the valuation of intellectual (intangible) capital, including the professional valuation of intellectual property and intangible assets.

Keywords: Knowledge-based-economy, intellectual capital, intangible assets, market value.

1. More and more we hear people say that we have entered a new economy: information economy, post-industrial society, knowledge based economy. Whatever their names and differences, there is a major similarity between these kind of economies: the competitive advantage within these new economies has shifted from material and financial assets to intangible assets, to intellectual capital.

Intellectual capital has always existed but an explicit recognition of its importance is relatively new phenomenon. This is because the past decades our production process has changed. Traditional factors of production (natural resources, labor, capital) have lost its significance. At the same time the importance of intangible inputs, like information and knowledge increased. In today's economy indicators like revenues, profits and assets only tell a minor part of organization's situation. The real wealth of organizations has to be sought in the people, their knowledge and skills, internal processes and the organization's reputation. It's well known the fact that main sources of competitive advantage have become intangible. What we need is a more reliable guide that provides better insight into the value of these intangible assets and their contribution to economic development and growth.

We could define intellectual capital as all intangible resources that are available to an organization, that give a relative advantage, and which in combination are able to produce future benefits. The concept of "intellectual capital" is used essentially by managers in the administration of personnel and intangible assets, in creating a favorable image of a company with the aim of attracting investment, and in valuing a knowledge based business with a view to sale or purchase.

In order to measure and manage intellectual capital it is important to be more precise about the different components: human capital, structural capital and relational capital. Human capital – anything related to people: knowledge, education, competencies of individuals in realizing organizational tasks and goals. Education is "the basic building block of human capital".

Structural capital – represents "non-human storehouse of knowledge, which are embedded in its technological, information and communications systems as represented by its hardware, software, databases, laboratories and organizational structures" (Bontis, 2004, p.8).

Relational capital – the intraorganizational relationships and linkages and the extent to which organizations are able to capitalize on cooperative and coordinating capabilities.

Although the intellectual capital is unique we can improve comparability by using the same conceptual models.

In 2002, the European Council held a special meeting to agree a new strategic goal for the European Union in order to strengthen its knowledge-based economy. The goal was set to “become the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion.” (Lisbon European Council, 2000)

2. Valuation of intellectual capital. Originally, the difference between the value of assets and value of the company was described as goodwill. Subsequently this has expanded to take account of, for example, undervalued tangible assets or purchased intangibles such as brands. There were also methods used to help estimate the greater earning power following a merger or acquisition. As intellectual capital came to the fore, measures were developed to monitor three underlying assets:

- human capital – the documented skills and experience of the staff
- structural capital – patents owned or pending, the infrastructure, “everything that remains in the company after the office is closed”
- customer capital – the history of customer relationships in place, the value of the customer base in relationship marketing terms.

The methods employed can be divided between those with an accounting basis, such as Tobins’ Q or EVA, and those with an indicator basis, such as the balanced score card, and various tools such as navigators or monitors. These approaches have tended to focus on the visible or content components of assets, i.e. those aspects that can be counted or valued. This is essentially a static and historical view of intellectual capital. It is not very useful if the assets are very vulnerable – for example if the expertise of a group of employees can quickly be lost.

2.1. Valuation of intellectual capital at the time of the sale of a business. In theory the market value of a knowledge-based business should not be different from the market value of any other business generating the same financial results. “The value of a company depends only on the size of the cash flow generated by its activities and does not depend on its asset structure”. (Edvinsson & Malone, 1997)

The market value of a company is a magnitude used in calculation. The actual price may be substantially higher or lower, depending on a specific circumstances in which the transaction is accomplished.

Intangible assets valuation is the most delicate part of a valuation of a business. It is essentially in the context that the valuation of a business normally precedes the evaluation of intangible assets. The market value of the business as a whole is determined using the income approach and/or comparable sales analysis. Then the market value of tangible assets is assessed. The valuation of intangible assets as a whole is obtained as a difference between the market value of the company or business and the value of its tangible net assets (assets after deduction of liabilities). This approach to the evaluation of intangible assets or intellectual capital is usually called “the return-on-assets” methods. Subsequently the value of intellectual capital and the value of the business are refined in the light of these refinements.

In addition, the return-on-assets valuation procedure tallies with the principles of bookkeeping and with the fact that usually by no means all intangible assets at the

time of the sale of a company are reflected in its balance sheet. The difference between the price of the sale-purchase of a company and the value of its net assets was reflected in the balance sheet as goodwill. This took automatically into account the value of all intangible assets not recorded on balance sheet. However, as the knowledge-based economy expanded, this practice ceased to tally with the facts.

2.3. Intellectual capital and intangible assets. The relationship between the concept of intellectual capital and intangible assets is equally complex, if intangible assets is understood in the precise accounting sense. Intangible assets are defined as any long-term assets which are not linked directly with any tangible object. For a long time intangible assets were considered to include any assets for which no place had been found among other “normal” assets. Consequently the composition of intangible assets is highly heterogeneous. The best known of them- goodwill- is obtained as the difference between the price of buying a company and the value of its net assets – i.e. it is essentially a bookkeeping fiction which is not connected with any specific object part from the company as a whole. Moreover, intangible assets include a multitude of identified assets, i.e. assets linked with a specific non-material object (an invention, a trademark, etc.), improvement of leased property, a contract. The basis for accounting of any such asset on a balance sheet is usually the existence of outgoings on acquiring or creating it. In other words, the balance sheet reflects not assets as such, but bookkeeping operations linked to their acquisition.

Intellectual property rights constitute only a part of identified intangible assets.

A significant part of the intellectual property rights belonging to a company are not reflected on the balance sheet, as they did not arise in connection with any bookkeeping operations. Most often copyright is not reflected on the balance sheet because it arises by virtue of the creation of the work, while the corresponding costs can be recognized as expenditure.

2.4. Intellectual capital accounts. Intellectual capital accounts are viewed as an instrument for measuring intellectual capital, managing it and displaying the company's attraction to investors. Such accounts are of two types. The more detailed account is prepared for internal requirements, first and foremost for management and to display to the staff of the company for the purpose of consolidating common efforts. The abbreviated report (which omits information that is not intended for public distribution) can be prepared for publication with the aim of attracting investment or for distribution to potential investors.

But intellectual capital accounts cannot stand alone. They become important only when seen in a context which is a vision of the management system and the competition form. In this context intellectual capital accounts give a more adequate idea of the new reality than the traditional intangible assets.

Practice shows that potential investors readily acquaint themselves with intellectual capital accounts. For them it is not so important that the intellectual capital valuation should be expressed in monetary terms, but the clear presentation of data is very significant.

3. Valuation of intangible assets according to international standards. The international valuation standards adopted in 2001 consist of standards proper and guidance for their application. Specifically, guidance note No. 4 is devoted to the valuation of intangible assets.

In November 2000 the European Group of Valuers' Associations (TEGoVA) published new valuation standards (European Valuation Standards, 2000) which are

supplemented by methodological guidance. According to the note No.8 all intangible assets subject to valuation, including intangible assets which are not taken into account in the balance sheet, are divided into three categories: goodwill of a business, personal goodwill and identifiable intangible business assets. Business goodwill is inseparable from the company and may be taken into account on the balance sheet after its sale. Personal goodwill, as a rule, is linked to the person of the head of the company, is not transferred when it is sold and consequently is not taken into account when its value is calculated, except in cases where, after a change of company ownership, the same person continues to head it. Identifiable intangible business assets can be individually valued if a finite economic life can be attached to them and if over that period they produce benefits for the business. Usually this category includes intellectual property rights and other similar assets, including know-how, information resources, list of customers.

The problem of designing measurements and evaluation of intellectual capital has not been fully resolved. But the models of measurements and evaluation of knowledge and intellectual capital can serve different specific purposes of different organizations. Some of them can use these models as diagnosis-analyze to evaluate the accomplished progress.

REFERENCES

1. Bontis, N Managing Organizational Knowledge by Diagnosing Intellectual Capital, Oxford University Press, New York, 2002
2. Edvinsson, L.,
Malone, M.S., Intellectual Capital: Realizing Your Company's True Value by Finding Its Hidden Brainpower, Harper Business, New York, 1997
3. European
Valuation
Standards The European Group of Valuer's Associations, The Estate Magazine, 2000
4. European
Parliament Lisbon european Council, 23-24 March 2000, Presidency Conclusions, [http:// europarl.eu.int/summits/lis1_en.htm](http://europarl.eu.int/summits/lis1_en.htm)
5. Roos, G et al Intellectual Capital: Navigating in the New Business Landscape, New York University Press, New York, 1997
6. Stewart T.A Intellectual Capital: The New Wealth of Organizations, Bantam Doubleday/ Currency, New York, 1999
7. Sveiby K.E The New Organizational Wealth. Managing and Measuring Knowledge based Assets, Barret-Koehler Publishers Inc., San Francisco, 1997